

# **Coordinating Major Transportation Investments with Land Use Planning:**

## **PACTS Transportation Project Land Use Policy**

**MaineDOT Interagency Meeting  
April 12, 2005**

**John Duncan, PACTS Director**

**Tex Haeuser, AICP, Chair, PACTS Land Use Committee**

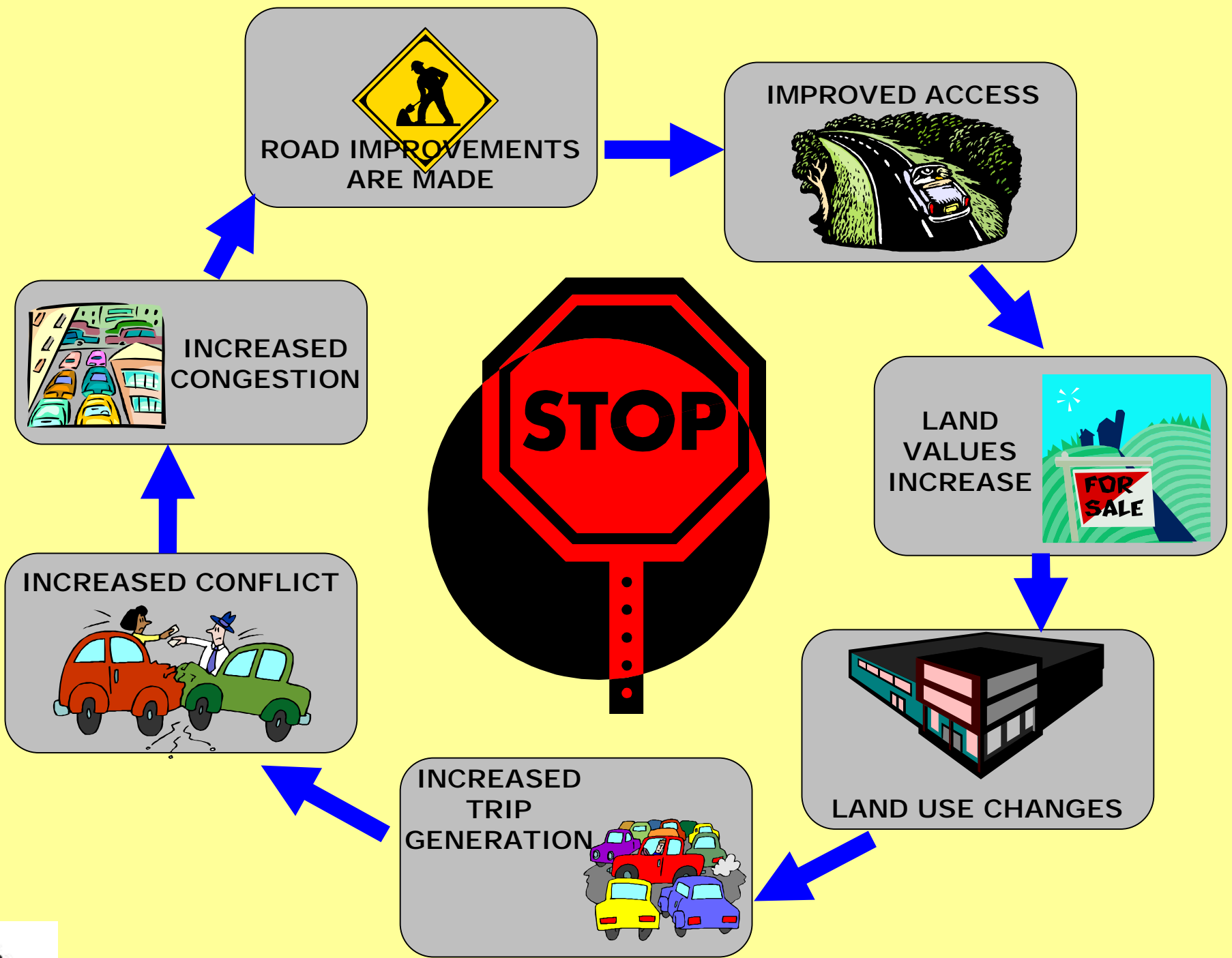
**Bruce Hyman, AICP, Wilbur Smith Associates**



# Presentation Outline

- **What's the Issue?**
- **The Importance of Integrated Transportation & Land Use Planning**
- **Important Concepts / Tools / Techniques**
- **Ideas for Achieving Better Integration in Maine**
- **Discussion**

# The Typical Transportation-Land Use Cycle



## PACTS Transportation Project Land Use Policy

# The Importance of Integrated Planning

- **Quality of Life / Quality of Place**
  - **Cultural**
  - **Historic**
  - **Social**
- **Environmental Quality**
- **Community Character**
- **Economic Vitality**
- **Mobility and Accessibility**
- **Costs of Sprawl**



# Key Ingredients

- **Collaboration & Partnerships**
- **Coordinated Action**
- **Trust**

# **PACTS Transportation Project Land Use Policy: Implementation Guidelines**



Linking Our Communities • Advancing Our Region

# What is PACTS?

## Transportation Planning Agency for Greater Portland

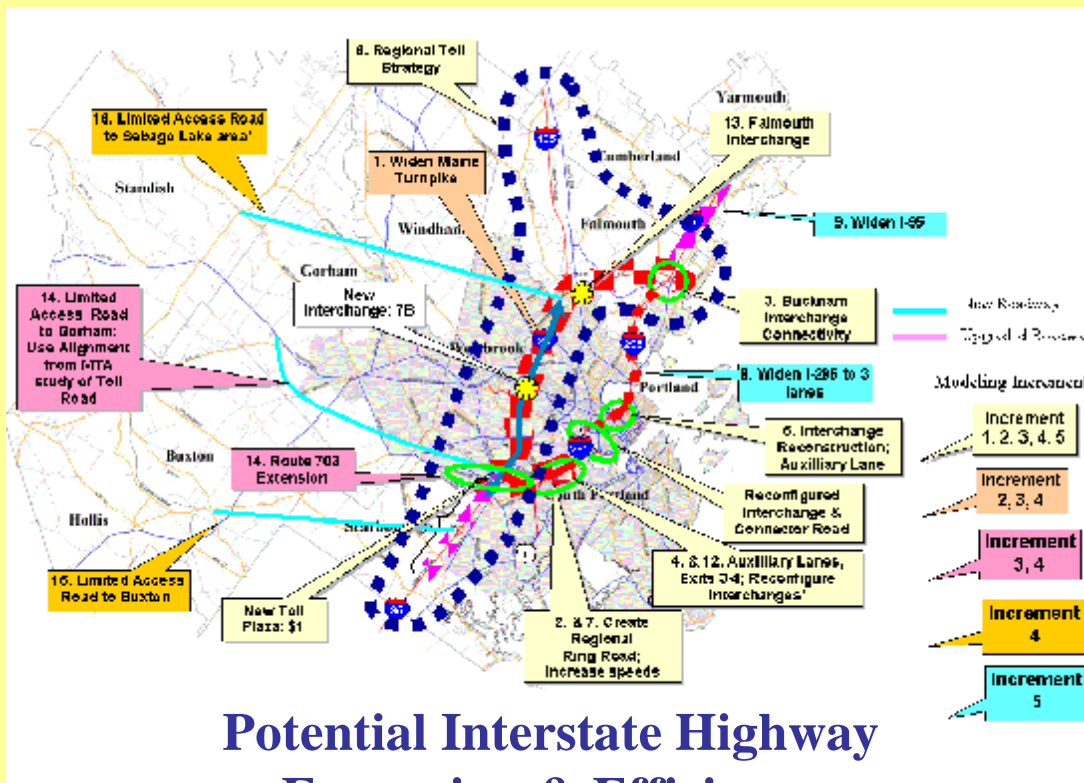
- **Coordinating Transportation Planning**
- **Programming Federal Transportation Funds in the Area**
- **Long Range Transportation Plan**



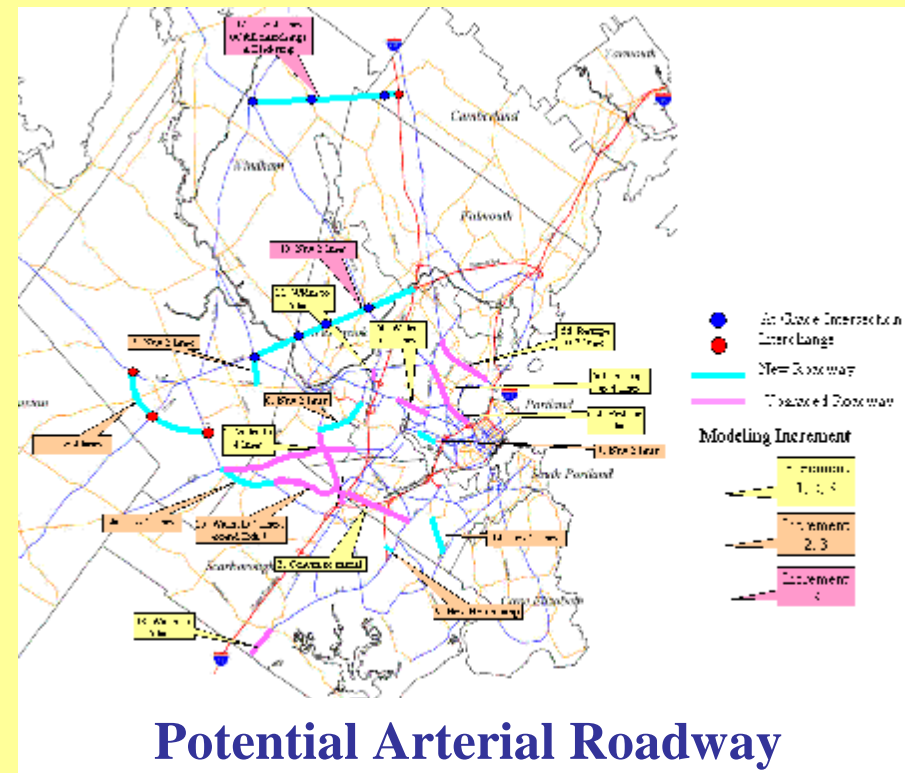
# Evolution of the Policy

## Discussions by Planning Committee About New Road Capacity

### § Concerns Over New Roadway Capacity Accelerating Sprawl



Potential Interstate Highway Expansion & Efficiency



Potential Arterial Roadway Expansion & Efficiency





# **The PACTS Transportation Project Land Use Policy**

**“A transportation project, that by itself or as part of a program of improvements, will create significant new transportation capacity within a corridor, must integrate transportation and land use plans that:**

- Preserve corridor capacity;**
- Actively manages corridor mobility;**
- Protect public investment in infrastructure and public services; and,**
- Combat sprawl with compact, mixed use transportation-efficient land uses.”**

*(Recommended revisions)*

***Links Transportation Funding to Land Use Plans***



# Shaping the Policy Guidelines

## § Develop Guidelines to Implement the Policy

§ When Does it Apply – What Type of Projects?

§ Who & How to Determine an Acceptable Plan

§ Address the Four Policy Objectives

## § Mesh with Existing Laws, Regulations, Policies – Local, Regional & State

§ Strongly Influence Early Concept Planning

## § Be Appropriate to the Maine & Greater Portland Context



# **Key Concepts & Principles**

**§ Emphasis on Compact, Transportation Efficient & Pedestrian-Scaled Land Use**

**§ Job and Residential Densities to Support Transit & Reduce Auto-related Travel Demand**

**§ Mix of Land Uses Required:**

**§ Residential**

**§ Commercial**

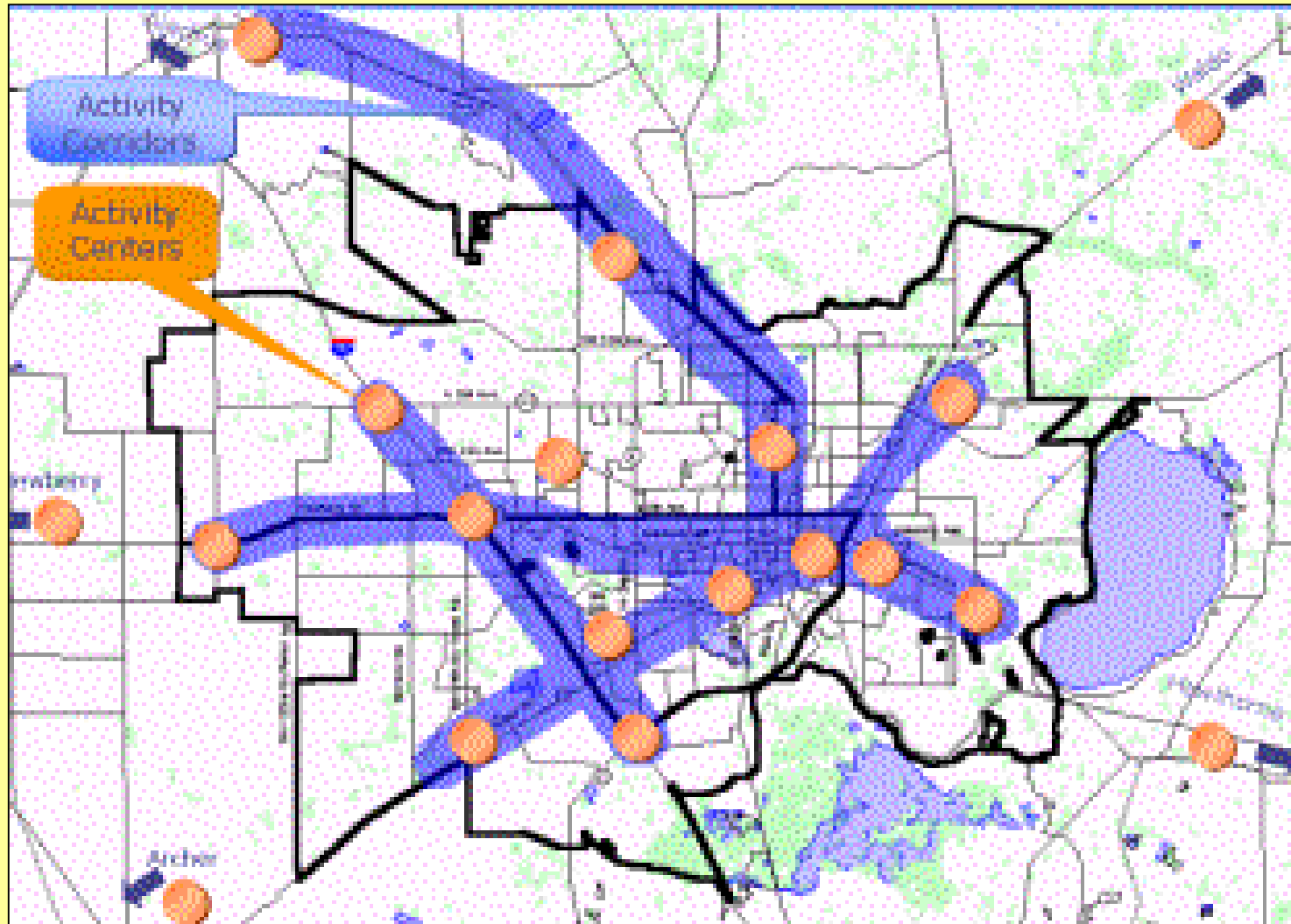
**§ Public / Civic / Open Space**

**§ Corridors are the Appropriate Scale for this Type of Planning**



# Corridors Within A Regional Growth Context

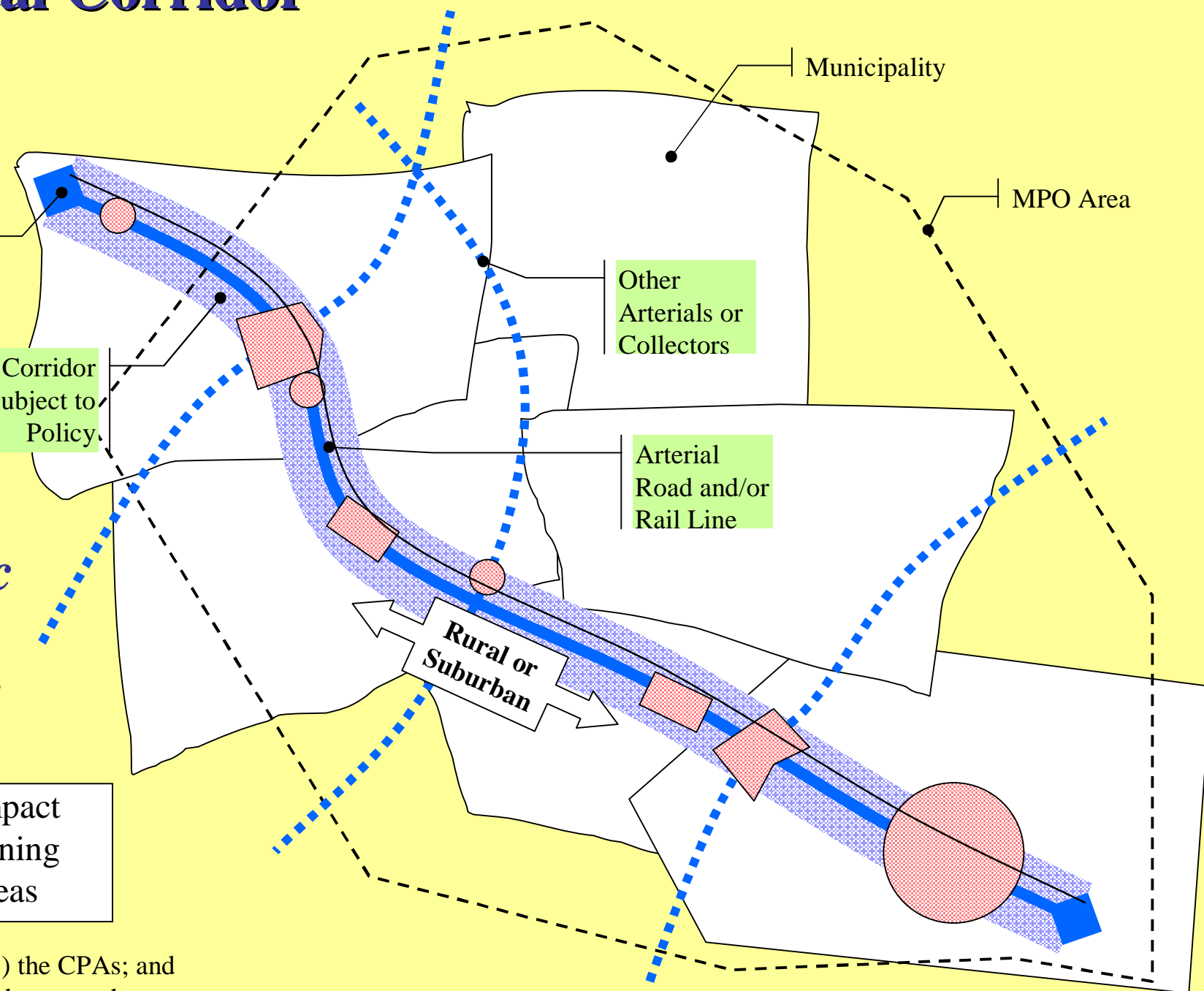
## Town/Village Centers Concept



Source: Gainesville FL MPO.

# Hypothetical Corridor

*Multiple Geographic Scales Addressed!*



Compact Planning Areas

Planning Areas are: 1) the CPAs; and 2) the transition areas between them



## PACTS Transportation Project Land Use Policy

# **DRAFT Content & Format of Guidelines**

## **§ Policy Framework**

**§ Background**

**§ Applicability**

**§ Decision-making**

## **§ Planning Checklist**

**§ Measures Related to the Four Objectives**

**§ Matrix to Inform the Land Use Measures**

**§ Compatibility & Integration with Other Rules/Regulations and Planning Processes**

**§ Available Tools and Resources to Conduct the Plan & Then Implement**



# Policy ‘Triggers’: *Which Projects?*

## Suggested Trigger Follows & Expands Sensible Transportation Policy Act

### § Significant Highway Projects

§ e.g., Added Through-Lane Capacity

### § New Interstate Interchanges

### § Significant Transit Projects

§ e.g., New Passenger Rail Services

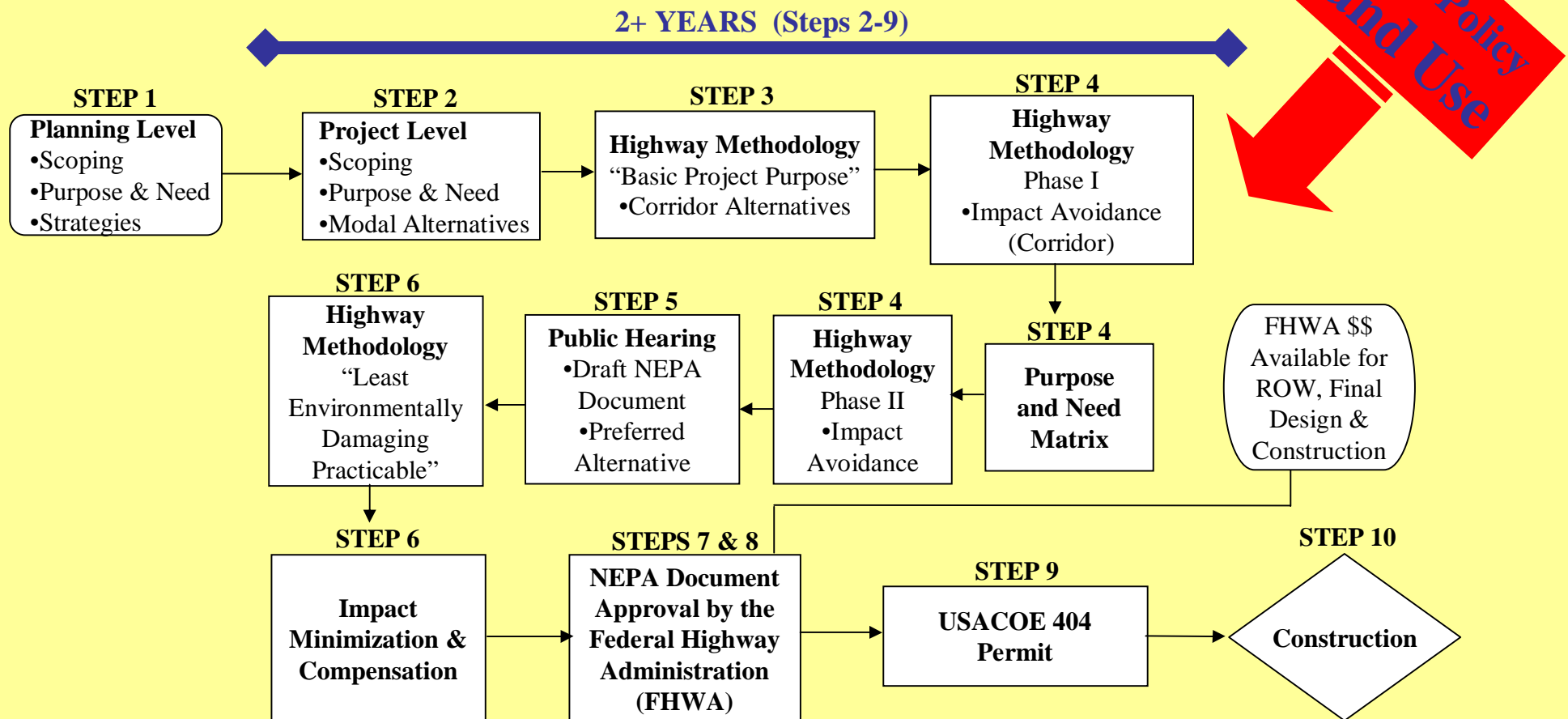
§ e.g., New Alignment Bus Rapid Transit



# How it Might Work

## MaineDOT: Integrated Transportation Decision-Making

- National Environmental Policy Act (NEPA)
- Maine's Sensible Transportation Policy Act (STPA)
- U.S. Army Corps of Engineers (USACOE) Highway Methodology (NEPA/404)



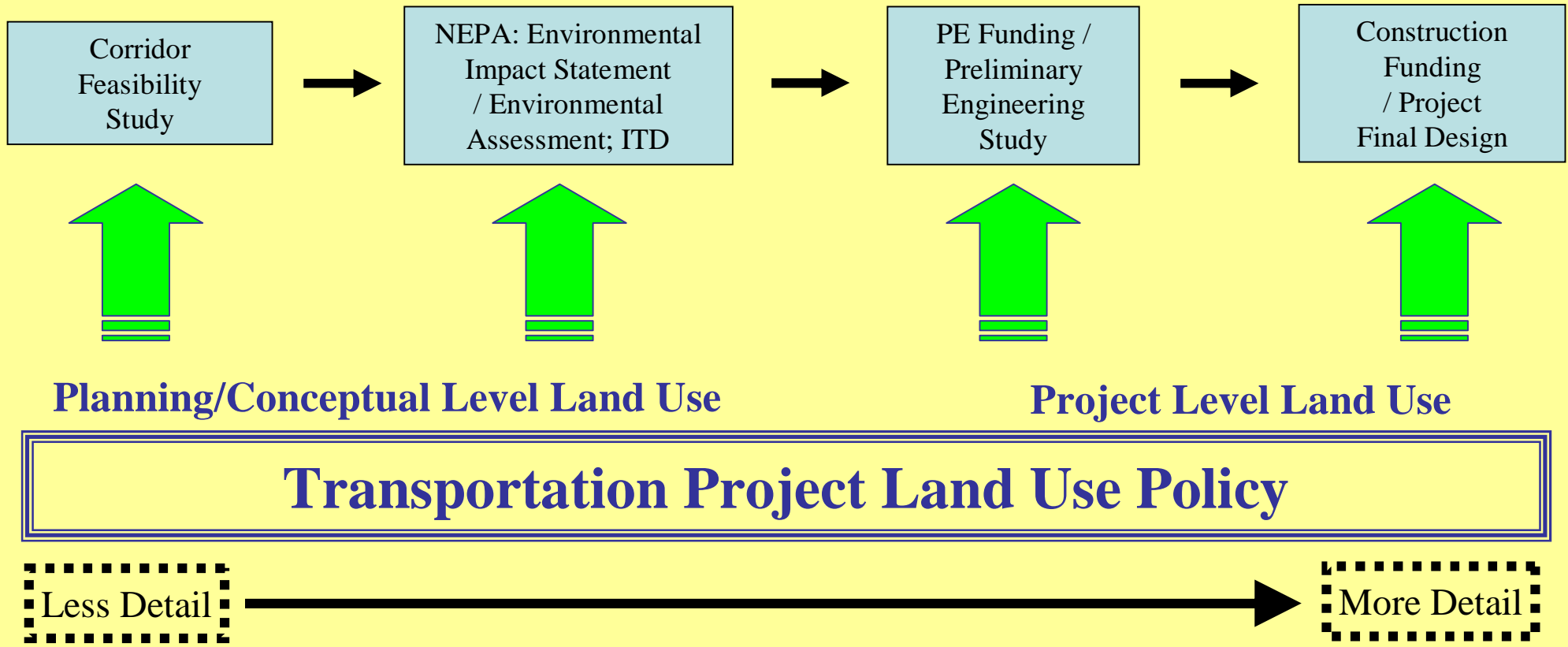
**PACTS Transportation Project Land Use Policy**





# Project Development Process

## Four Typical Project Development Phases



# How it Might Work

## Corridor Feasibility Phase

(Feasibility Phase example)

Emphasis on:

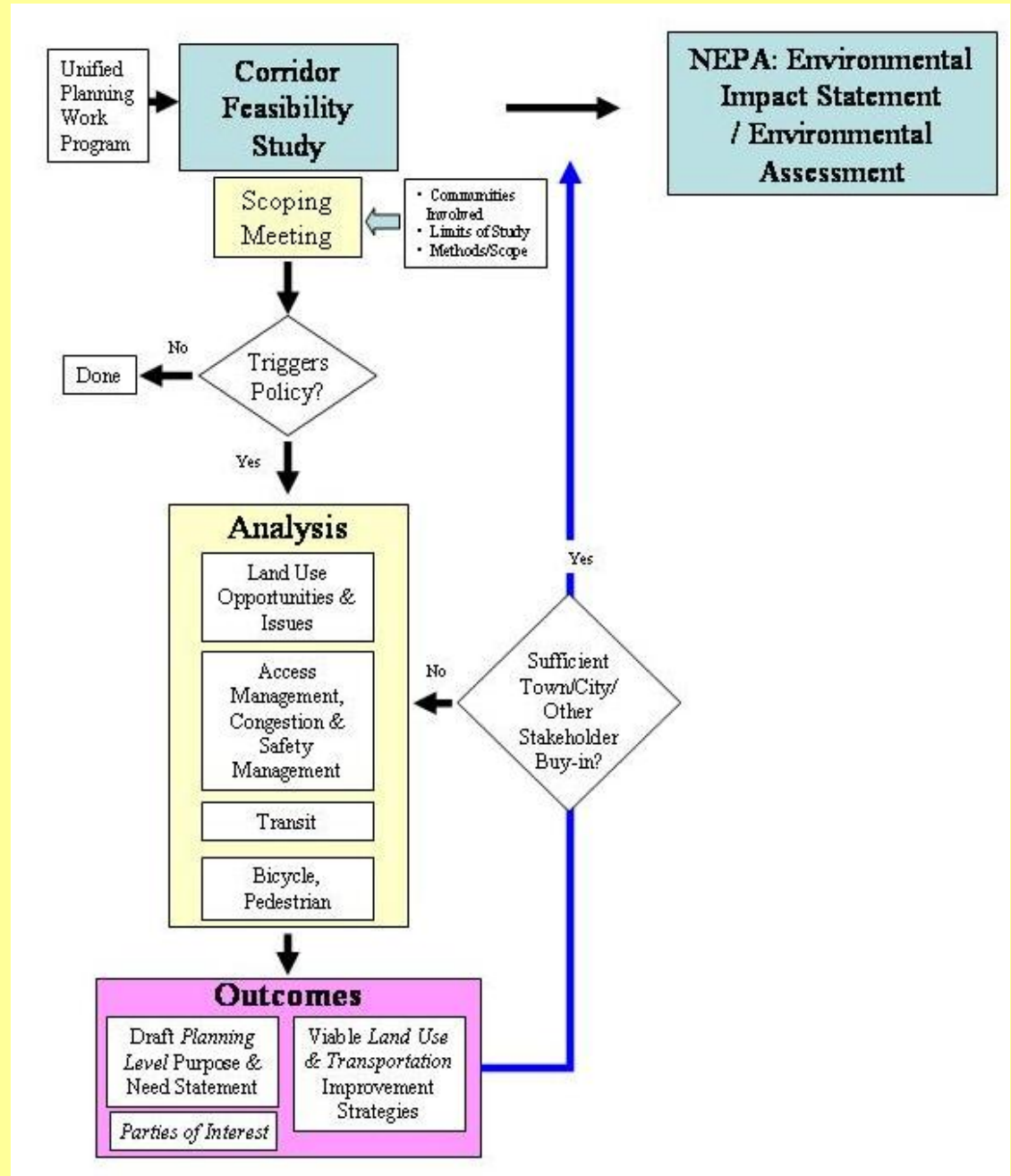
§ Scoping

§ Communities

§ Range of Transport  
& Land Use Options

§ Community Buy-in

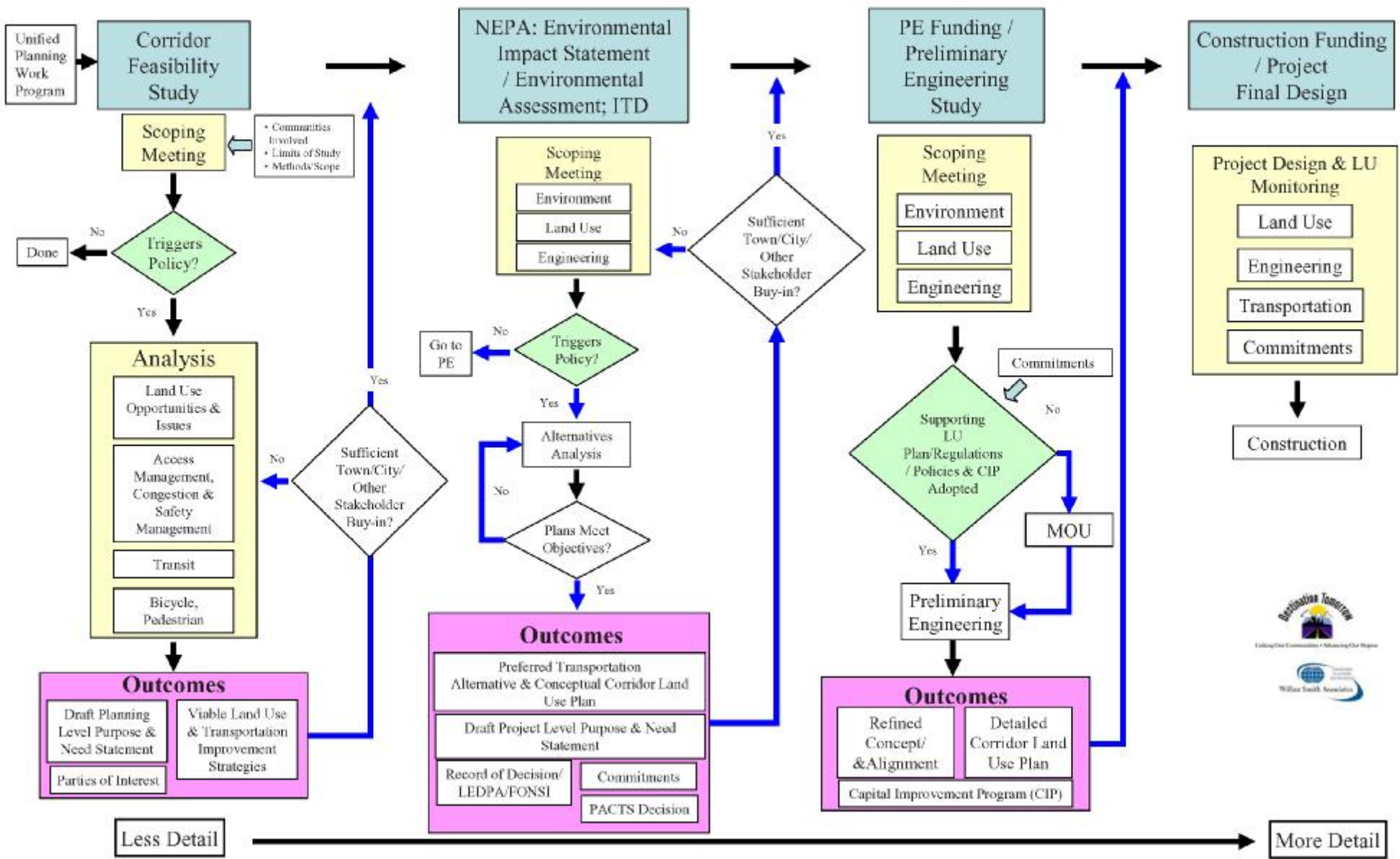
§ Integrated Analysis



# How it Might Work

1-18-05  
DRAFT

## PACTS Transportation Project Land Use Policy Framework: Project Development Process



## PACTS Transportation Project Land Use Policy

# Policy Implementation Checklist

<b>1. Preserve Arterial Capacity</b>
Curb Cut Density
Meets MaineDOT Arterial Design
Level of Street Conn
Travel Demand Relat
Travel Demand Man
Jobs:Persons Ratio
Retail Jobs:Non-retail Jobs Ratio
<b>2. Protect Mobility</b>
Quality of Service:
Peak Hour Automobile Travel
Peak Hour Transit
Off Peak Transit
Bicycle Access/Accommodations
Pedestrian Environment
Intermodal Connections
(see also many 'Minimize Sprawl' items)
<b>3. Protect Public Investment</b>
Life Cycle Costs
Benefit Cost Ratio
Level of Access Control
Proximity to Supporting Infrastructure/Facilities
Proximity to Existing Development

**Four Objectives**

## 4. Minimize Sprawl

	Existing	Planned	Comments
Land Use			
Area Size	Below/Within/Over	Below/Within/Over	(matrix)
Core Area Identified	Y		
Secondary Area Identified	Y		
<b>Mix of Uses (By % of Gross Area)</b>			
<i>Core Area</i>			
Commercial Uses, % of area	Below/Within/Over	Below/Within/Over	(matrix)
Residential Uses, % of area	Below/Within/Over	Below/Within/Over	(matrix)
Public Uses, % of area	Below/Within/Over	Below/Within/Over	(matrix)
<i>Secondary Area</i>			
Commercial Uses, % of area	Below/Within/Over	Below/Within/Over	(matrix)
Residential, % of area	Below/Within/Over	Below/Within/Over	(matrix)
Public, % of area	Below/Within/Over	Below/Within/Over	(matrix)
<i>Core Area</i>			
Jobs/Acre	Below/Within/Over	Below/Within/Over	(matrix)
HU/Acre	Below/Within/Over	Below/Within/Over	(matrix)
<i>Secondary Area</i>			
Jobs/Acre	Below/Within/Over	Below/Within/Over	(matrix)
HU/Acre	Below/Within/Over	Below/Within/Over	(matrix)
<i>Critical Mass</i>			
Population	Below/Within/Over	Below/Within/Over	(matrix)
Housing Units	Below/Within/Over	Below/Within/Over	(matrix)
Jobs Critical Mass	Below/Within/Over	Below/Within/Over	(matrix)
Floor Area Ratio	Below/Within/Over	Below/Within/Over	(matrix)
Multi-Family:Single Family Ratio	Below/Within/Over	Below/Within/Over	Lower Value / Higher Value (matrix)

**Existing & Planned**

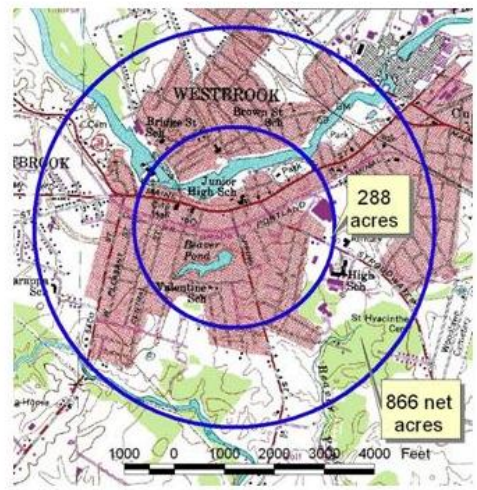
Yes/No	Yes/No	Public water & sewer, public safety (fire & police), schools



# Compact Planning Areas: Five Prototypes

## PACTS Arterial Land Use Policy Compact Planning Areas

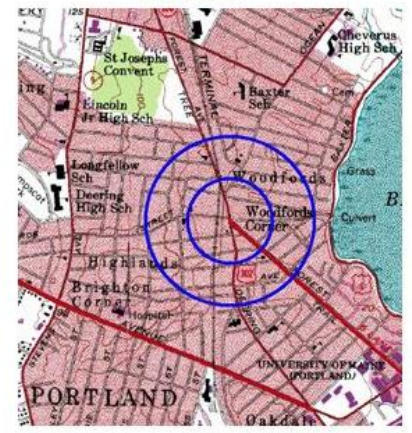
### Downtown Urban Center



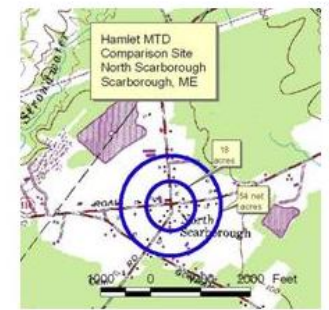
### Downtown Village Center



### Neighborhood Center



### Hamlet



### Suburban Center



## Land Use Planning Guidelines

**Preferred Land**

Use Mix (by % area):	Core Area	Secondary Area
Commercial	30%-70%	20%-60%
Residential	20%-60%	20%-60%
Public	5%-15%	5%-15%

**Core Area:** Higher Intensity Mix of Urban Commercial and Residential Uses. Multiple story buildings, supported by surface and structured parking.  
**Typical Uses:**

**Secondary Area:** Moderate Intensity Mix of Complementary Commercial and Residential Uses. Multiple story commercial buildings.  
**Typical Uses:**

**Threshold Guidelines:**  
Minimum HU: 2500  
Minimum Jobs: 500

**Preferred Land**

Use Mix (by % area):	Core Area	Secondary Area
Commercial	30%-70%	15%-30%
Residential	20%-60%	50%-80%
Public	10%-15%	10%-15%

**Core Area:** Moderate Intensity Mix of Urban Commercial and Residential Uses. Multiple story commercial buildings, supported by surface and shared parking.  
**Typical Uses:**

**Secondary Area:** Moderate (but lower) Intensity Mix of Complementary Commercial and Residential Uses. Some multiple story commercial buildings.  
**Typical Uses:**

**Threshold Guidelines:**  
Minimum HU: 500  
Minimum Jobs: 500

**Preferred Land**

Use Mix (by % area):	Core Area	Secondary Area
Commercial	20%-60%	15%-30%
Residential	30%-70%	50%-80%
Public	10%-15%	10%-15%

**Core Area:** Moderate Intensity Mix of Urban Commercial and Residential Uses. Mostly multiple story commercial buildings, supported by surface and shared parking.  
**Typical Uses:**

**Secondary Area:** Moderate (but lower) Intensity Mix of Complementary Commercial and Residential Uses. Some multiple story commercial buildings.  
**Typical Uses:**

**Threshold Guidelines:**  
Minimum HU: 150  
Minimum Jobs: 200

**Preferred Land**

Use Mix (by % area):	Core Area	Secondary Area
Commercial	10%-40%	5%-15%
Residential	50%-80%	50%-80%
Public	10%-15%	10%-15%

**Core Area:** Moderate Intensity Mix of Commercial and Residential Uses. Some multiple story buildings supported by surface and shared parking.  
**Typical Uses:**

**Secondary Area:** Lower Intensity Mix of Complementary Commercial and Residential Uses. Multiple story buildings.  
**Typical Uses:**

**Threshold Guidelines:**  
Minimum HU: 100  
Minimum Jobs: 100

**Preferred Land**

Use Mix (by % area):	Core Area	Secondary Area
Commercial	10%-40%	5%-15%
Residential	50%-80%	50%-80%
Public	10%-15%	10%-15%

**Core Area:** Moderate Intensity Mix of Suburban Commercial and Multi-family Residential Uses. Some multiple story commercial buildings, supported by surface and shared parking.  
**Typical Uses:**

**Secondary Area:** Lower Intensity Uses either highly commercial or highly residential.  
**Typical Uses:**

**Threshold Guidelines:**  
Minimum HU: 300  
Minimum Jobs: 400



Note: These are developed to help *Inform, NOT Determine*, Preferred Land Use Strategies.



# Compact Planning Areas: Land Use Concepts

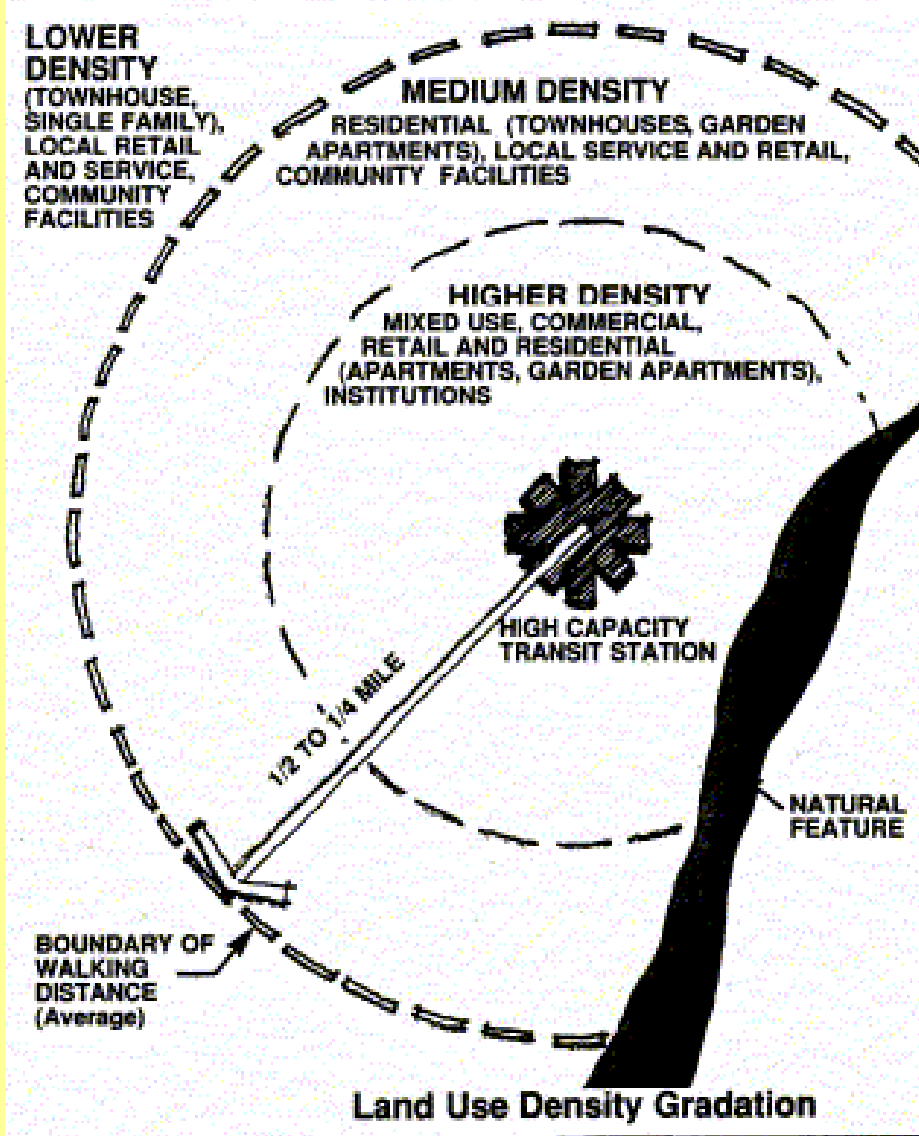
§ Density - Intensity of Uses

§ Diversity – Mixing of Uses

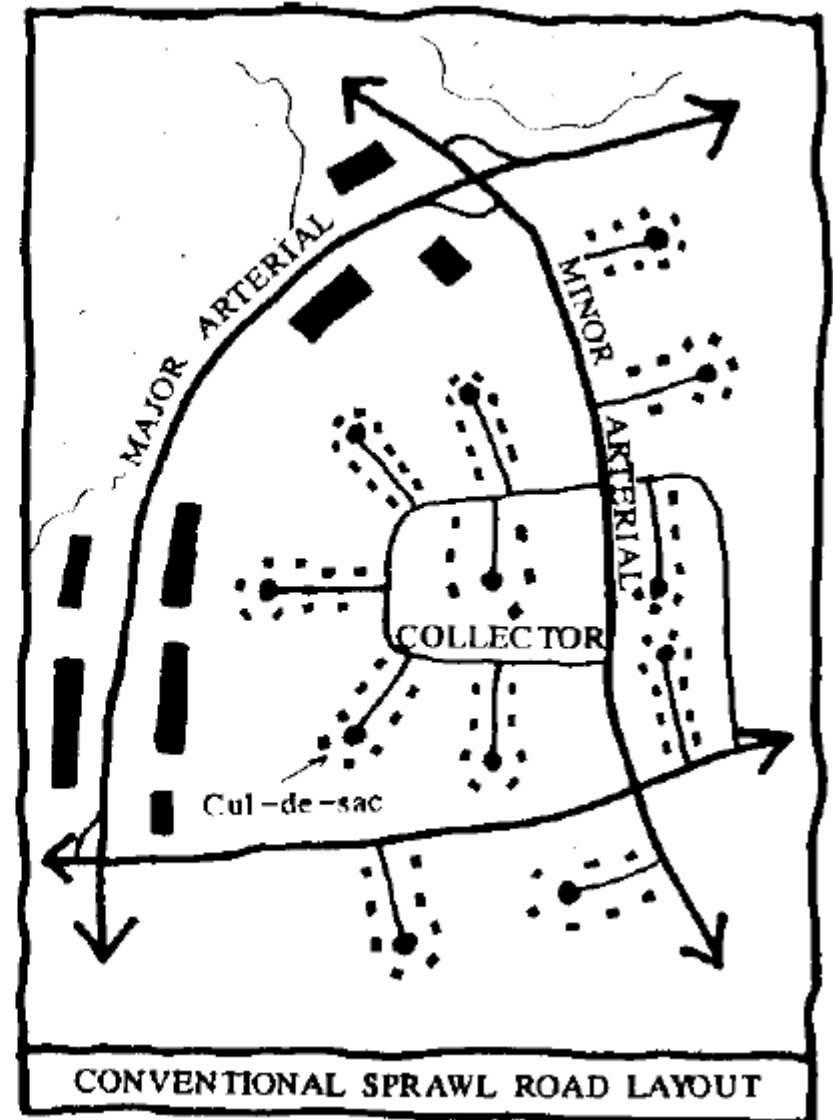
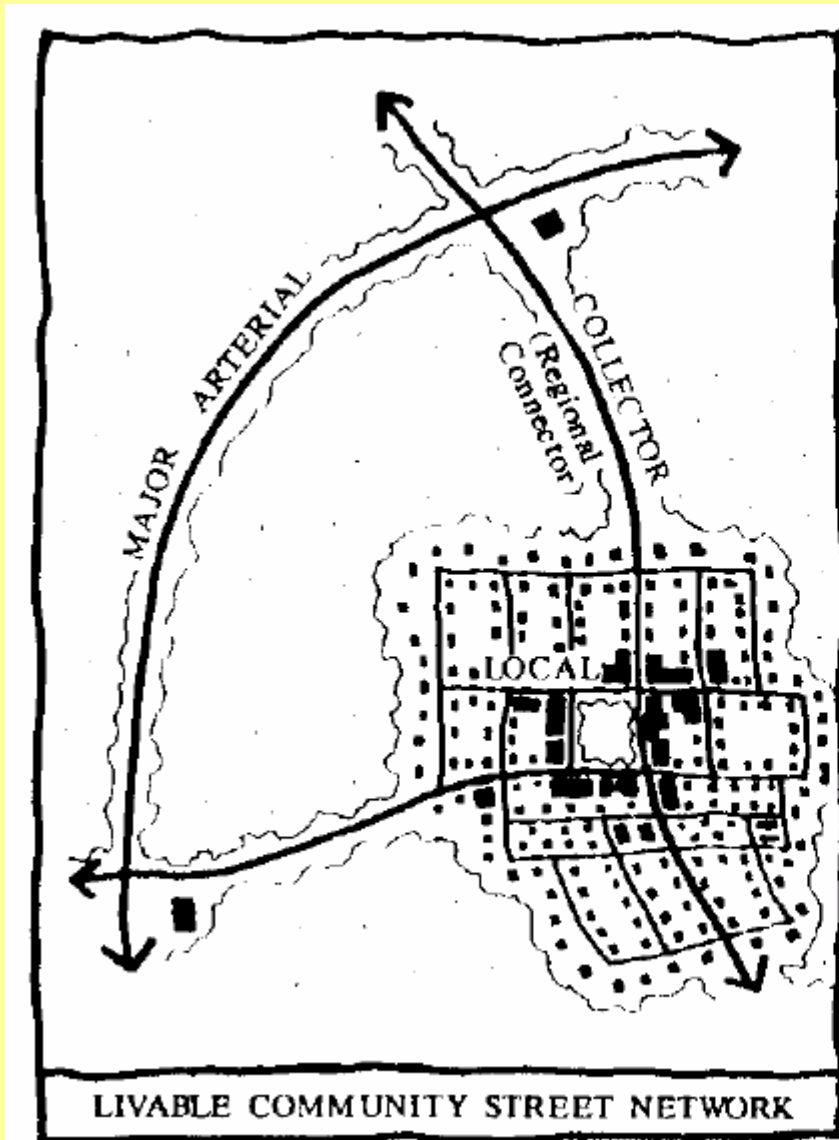
§ Design – Quality;

Pedestrian Orientation

§ *Set the Land Use Context For Success of Multimodal Approaches: Rail / Bus / Walk / Bike*



# Setting the Context



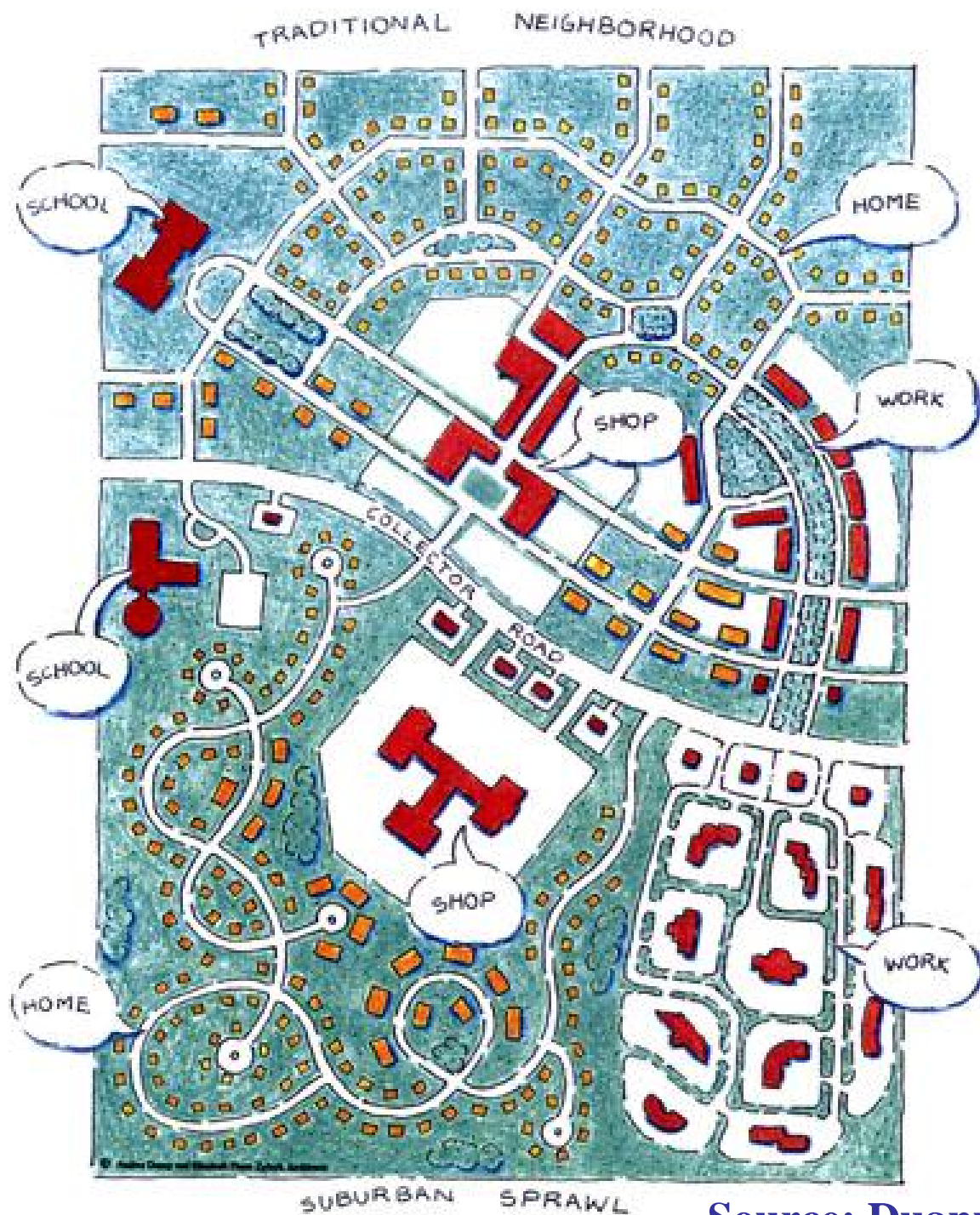
Source: Traditional Neighborhood Design Manual, Olathe, Kansas.

# Setting the Context

**Traditional  
Neighborhoods**

VS

**Suburban  
Sprawl**



Source: Duany





# Land Use Matrix

§ Key Part of Checklist

§ Allow Flexibility to Achieve Objectives, Not Prescribe Outcomes

§ Ranges of Values & Thresholds

§ Ratios of Key Land Use Parameters

§ Minimum Thresholds  
– Critical Mass for Vitality / Viability

Ranges & Thresholds	Planning Areas				
	Downtown		Neighb. Center	Hamlet	Suburban Center
	Urban Center	Village Center			
<i>Area size: Preferred</i>	Range of Desirable Area Size				
square miles					
Acres					
<i>Core Area</i>	Range of Mix of Desirable Land Uses (%)				
Commercial					
Residential					
Public/Open Space					
<i>Secondary Area</i>	Range of Mix of Desirable Land Uses (% of Area)				
Commercial					
Residential					
Public/Open Space					
<i>Jobs/acre (gross)</i>	Range of Intensities of Jobs (per Acre)				
Core Area					
Secondary Area					
<i>Housing Units/acre (gross)</i>	Range of Intensities of Housing (per Acre)				
Core Area					
Secondary Area					
<i>Critical Mass</i>	Minimum Jobs and Housing Thresholds				
Min. HU					
Min. Persons					
Min. Jobs					
<i>Floor Area Ratio</i>	Range of Floor Area Ratios				
Net Bldg Sq Ft : Total Land Area (Comm.)					
<i>Minimum Ratios</i>	Minimum Pop.:Jobs; Retail:Non-retail Jobs; HU Ratios				
Population & Jobs (Core)					
Retail & Non-retail (Core)					
Family:Single Family HU					

**Compact Planning Area Types**

**Key Land Use Measures**

# Downtown: Village Center, Gorham Village

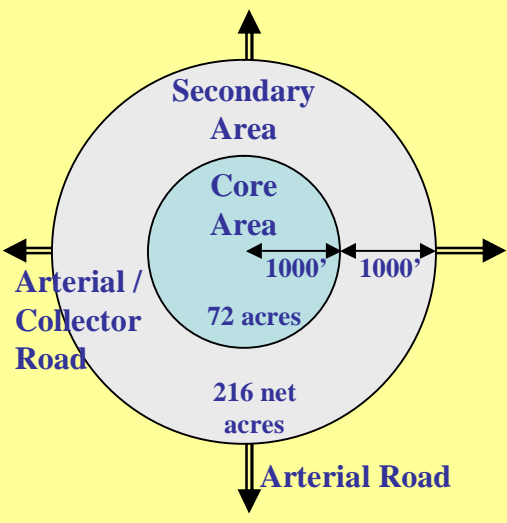
## Compact Planning Areas: 'Reality Check'

### Core Area:

- Moderate Intensity Mix of Urban Commercial and Residential Uses.
- Multiple story commercial buildings, supported by surface and shared parking.

### Secondary Area:

- Moderate (but lower) Intensity Mix of Complementary Commercial and Residential Uses.
- Some multiple story commercial buildings.



**Core Area: 1000' radius**  
**Secondary Area: 2000' radius**

### Desired Land

<u>Use Mix (by % area):</u>	<u>Core Area</u>	<u>Secondary Area</u>
Commercial	30%-70%	15%-30%
Residential	20%-60%	50%-80%
Public/Civic	10%-15%	10%-15%

### Gorham Village: Current Stats (2000)

**Total Population = 2929**  
**Total HU = 708; Total SF = 547; Total MF = 161**  
**Total Jobs = 1136; Total Retail Jobs = 362**  
**Total Non-Retail Jobs = 774**  
**Pop:Acre = 4.2; HU:Acre = 1.0**  
**Pop:Jobs = 2.6; MF:SF = 0.3**  
**Jobs:Acre = 1.6; Retail:Non-Retail = 0.5**

Source: PACTS TAZ Data, 2004



## PACTS Transportation Project Land Use Policy

# DRAFT Land Use Matrix: Compact Planning Areas

		Compact Planning Areas				
Ranges & Thresholds	Downtown		Neighb. Center	Hamlet	Suburban Center	
	Urban Center	Village Center				
<i>Area size: Preferred</i>		Range of Desirable Area Size				
square miles						
Acres	400-1200	100-400	50-200	25-125	75-250	
<i>Core Area</i>		Range of Mix of Desirable Land Uses (% of Area)				
Commercial	30%-70%	30%-70%	20%-60%	10%-40%	60%-85%	
Residential	20%-60%	20%-60%	30%-70%	50%-80%	5%-25%	
Public/Open Space	5%-15%	10%-15%	10%-15%	10%-15%	5%-10%	
<i>Secondary Area</i>		Range of Mix of Desirable Land Uses (% of Area)				
Commercial	20%-60%	15%-30%	15%-30%	5%-15%	5%-15%	
Residential	20%-60%	50%-80%	50%-80%	50%-80%	80%-85%	
Public/Open Space	5%-15%	10%-15%	10%-15%	10%-15%	5%-10%	
<i>Jobs/acre (gross)</i>		Range of Intensities of Jobs (per Acre)				
Core Area	80+ to 40	60 to 40	30 to 50	40 to 20	40 to 10	
Secondary Area	40+ to 30	30 to 20	30 to 10	25 to 10	20 to 5	
<i>Housing Units/acre (gross)</i>		Range of Intensities of Housing Units (per Acre)				
Core Area	14+ to 4	12 to 4	12 to 4	8 to 4	14 to 4	
Secondary Area	8+ to 2	8 to 2	6 to 2	4 to 2	6 to 2	
<i>Critical Mass</i>		Minimum Jobs and Housing Thresholds				
Min. HU	2500	500	150	100	300	
Min. Persons	5000	1000	300	200	600	
Min. Jobs	5000	500	200	100	250	
<i>Floor Area Ratio</i>		Range of Floor Area Ratios				
Net Bldg Sq Ft : Total Land Area (Comm.)	1.0	1.0	0.75	0.5	0.5	
<i>Minimum Ratios</i>		Minimum Pop.:Jobs; Retail:Non-retail Jobs; HU Ratios				
Population & Jobs (Core)	0.33	0.33	0.33	0.33	0.2	
Retail & Non-retail (Core)	0.2	0.2	0.2	0.2	0.2	
Family:Single Family HU	0.2	0.2	0.2	0.2	0.2	

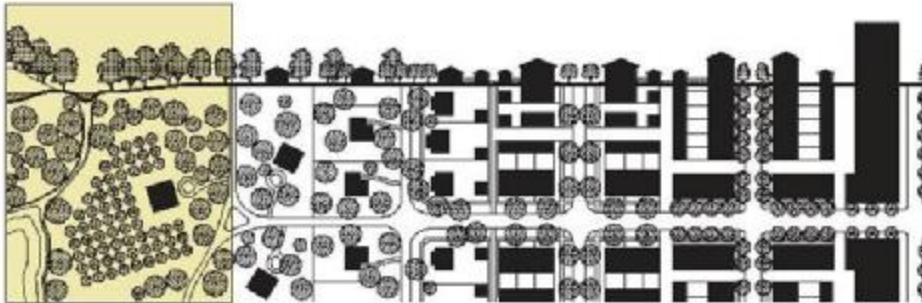


# Rural & Suburban Areas

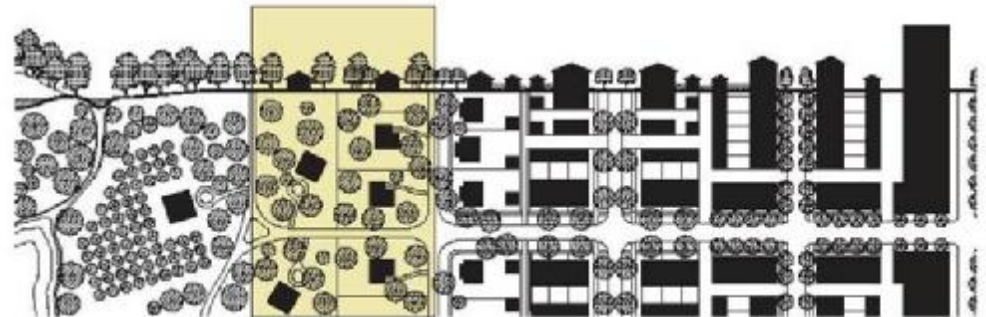
## A Work in Progress

- Focus on Desired Outcomes – possibly using the Transect Approach
- Descriptive (Rather than Prescriptive)

T1-T2 - Natural / Rural



T3 - Suburban



Source: Duany



# **Next Steps / Further Work**

**§ MaineDOT Role in Implementation**

**§ Work on Incentives / Disincentives**

**§ Develop Communication / Education Plan  
for Adoption & Implementation**

**§ Agency Reviews: MaineDOT / MTA / SPO  
/ FHWA**

**§ PACTS Adoption of Guidelines**



# **Making It Work**

## **Geographic Scale Matters**

**Integration must occur at multiple scales for success**

- **State (Policy/Funding/Decision-making)**
- **Corridor / Multiple Community Level**
- **Community Level**
- **Master Plan / Neighborhood Level**
- **Site Level**

# Fully Use Key Tools & Techniques

## Access Management

- Preserving Roadway Capacity & Mobility

## Context Sensitive Solutions / Design

- “Thinking Outside the Pavement”
- Flexible Designs

## Comprehensive Planning

- Growth Areas / Rural Areas
- Multimodal Planning & Implementation
- Build-out Scenarios

## Master Planning

- Neighborhoods as the Framework of Towns & Cities

## Development Review

- Pedestrian-scale and orientation



# Discussion